

REMARKS

General:

Claims 1 to 22 are pending in the application. Claims 1 to 22 stand rejected in the present office action. Claims 1 and 14 are amended. Claims 23-26 are new.

No new matter is added by this amendment.

35 U.S.C. § 103 rejections:

Claims 1-5, 8-10, 13-17, and 20 are rejected under 35 U.S.C. § 103 as obvious over U.S. Patent No. 3,136,458 (Ruetz) in view of U.S. Patent No. 6,330,959 (Dark).

Ruetz shows a container with a neck 1 and a soft plastic bushing fitting over the neck. The examiner equates the combined container and bushing of Ruetz with the “container” claimed in the present application. A cap 7 fits over the neck. The cap has an outer skirt terminating in a bead 8 that is “detachably held” (col. 1, line 47) in a groove 6 in the lip of the bushing. An inner tubular extension 9 fits inside the neck of the container. Downward projections 11 are provided on the inside of the lid, and corresponding upward projections 13 are provided on the neck of the container. The projections 11, 13 have sloping flanks so that rotating the lid will produce an upward motion to draw the bead 8 out of the groove 6 and release the cap from the container.

Dark shows a tamper-evident closure for a dispensing cap 12 of a drink bottle. A tamper-evident ring 30, attached to an overcap 20 by a plurality of frangible webs, engages in a groove 48 on the dispensing cap. A cam shoulder 46 on the dispensing cap seats in an indent 28 in the rim of the overcap. When the overcap 20 is rotated, the rim of the overcap rides up the cam 46, breaking a few of the frangible webs nearest to the indent 28. Continued rotation of the overcap 20 causes each part of the overcap to pass the cam 46, breaking the frangible webs one at a time. Because the frangible webs are broken one after another, and not all at once, Dark is able to use comparatively strong webs without requiring an undesirably high force to remove the overcap. There is no provision for securing the overcap after it has been once removed. There is no need to do so, because the dispensing cap 12 has a self-sealing spout under the overcap.

The examiner contends that it would have been obvious to add the tamper evident ring of Dark to the cap of Ruetz to achieve the advantage of an indication of tampering to Ruetz’s cap. The applicants disagree. Ruetz’s device is designed to be repeatedly closed and opened using the

bead 8 snapping into and out of the groove 6. Dark's device is a one-use, snap off and discard, anti-tamper overcap. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP § 2143.01, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). The examiner's proposed modification of Ruetz would render the cap unsuitable for Ruetz's purpose, and would therefore not have been obvious.

As a starting point, Ruetz and Dark do not disclose all the elements of independent claims 1, 14, and 23 as now presented. Specifically, claim 23 recites

... a plurality of downwardly extending teeth spaced radially inward and *apart* from said side skirt and spaced radially outward and *apart* from the plug seal and *directly connected to the top interior surface* ...

and similar language has been added to claims 1 and 14. These features are shown in Figure 1 of the application. Neither Ruetz nor Dark shows all these features. In particular, in Ruetz, it appears that the ramped portion is formed as an integral part of the plug seal (as shown by the component on the left indicated as number 11 in Fig. 1). Clearly, there are no downwardly projecting teeth that are spaced apart from the plug seal.

Dark cannot remedy this basic deficiency in Ruetz since Dark shows the indented portion 28 forming part of the skirt and not depending from the interior of the top.

Accordingly, the combination of Ruetz and Dark fails to disclose every element of claims 1, 14, and 23. Hence, a *prima facie* case of obviousness has not been made and, thus, the rejection of these claims must be withdrawn.

Furthermore, the configuration in Dark has serious drawbacks that would make its application to the device in Ruetz problematic and, thus steer away from its use. Since the teeth are located near the bottom of the skirt, the cap and bottle combination needs to be considerably taller. This requires the use of additional plastic, increasing the overall cost of the combination. The present invention eliminates this problem by locating the teeth on the top of the cap. However, the solution provided by the present invention is irreconcilable with the teaching of Dark, in which the cam and recess must be immediately adjacent to the tamper evident ring, to provide the uneven distribution of stress that is the key to Dark's invention.

Moreover, the device in Ruetz requires a separate snap on bushing 3. Claims 14 and 23 recite that the camming surfaces are formed integrally with the neck of the container. Thus, this clearly distinguishes claims 14 and 23 over Ruetz. It is noted that the design shown in Ruetz would require twice the amount of assembly time and many times more material than the present invention. Also, the dual component design requires that there be two sealing surfaces which actually increases the likelihood that one of the sealing surfaces will leak.

The present invention, as claimed in claims 1, 14, and 23, and in dependent claims 2-13, 15-22 and 24-26 is therefore believed to be non-obvious over the cited references. Claims 2-13, 15-22 and 24-26 are dependent from claims 1, 14 and 23 and, without prejudice to their individual merits, are deemed non-obvious over the cited references for at least the same reasons as their respective base claims.

In addition, claims 3 and 16 recite that the tamper-evident ring is spaced from the side skirt of the cap by a plurality of posts that taper outwardly towards the side skirt, and claims 4 and 16 recite that the posts comprise weakened portions located adjacent the tamper-evident ring. The cited references do not disclose or suggest these features, and the examiner does not allege the cited references disclose or suggest these features. The description of Dark does not discuss the design of the fragmentable webs in detail, but FIGS. 1, 2, and 8-11 clearly show the webs tapering in the opposite direction, so that the weakest point is adjacent the skirt, at the point of maximum stress from the action of the cam 46. For this reason also, the present invention as claimed in claims 3, 4 and 16 is deemed non-obvious over the cited references.

In addition, claims 10, 20 and 24 recite a plurality of upwardly-extending teeth or engaging members on the container engaging a plurality of downwardly-extending teeth or engaging members on the cap. It is essential to Dark's invention that there is only a single upwardly-extending engaging member (cam 46), so that the upward force is uneven, and breaks the webs 32 of the tamper-evident ring one after another. Providing plural teeth on both the cap and the container would result in a more evenly spread upward force, and would defeat Dark's

purpose. As applied to claims 10, 20 and 24, the examiner's proposed combination of Ruetz and Dark would result in a device that is unsuitable both for Ruetz's purpose and for Dark's purpose, and is doubly non-obvious. For this reason also, the present invention as claimed in claims 10, 20 and 24 is deemed non-obvious over the cited references.

Claims 6, 7, 18, and 19 are rejected as obvious over Ruetz and Dark and further in view of U.S. Patent No. 6,068,421 (Pierpont) or U.S. Patent No. 3,982,651 (Braun). Those are dependent claims, and Pierpont and Braun are relied on only for details of the shape of the teeth recited in claims 6, 7, 18, and 19. Without prejudice to their individual merits, claims 6, 7, 18, and 19 are deemed non-obvious over the cited combination of references for at least the same reasons as their respective base claims are non-obvious over Ruetz and Dark alone.

Claims 11-12 and 21-22 are rejected as obvious over Ruetz and Dark and further in view of U.S. Patent No. 1,615,157 (Baum '157). Baum is cited as teaching that "it is known to provide gripping ridges on a closure cap outer surface and skirt, for the purposes of improving a user's grip in twisting off the closure to remove it from a container." Baum does not teach that. Baum's closure cap is not a twist off cap. The ridges are provided to increase the stiffness of the rim 1, which is a snap fit on the lip of the milk bottle. Baum '157 is directed to an improvement in the central sealing disk 10, and does not discuss the structure of the rim in detail. However, Baum '157 at page 2, lines 23-26 explains that the cap, apart from the improved sealing disk 10, is described in Baum's earlier Reissue Patent No. 15,491 (Baum '491). The function of the stiffening ribs is described at page 2, lines 1-22 of Baum '491. For this reason also, the present invention as claimed in claims 11-12 and 21-22 is deemed non-obvious over the cited references.

Conclusion:

In view of the foregoing, reconsideration and withdrawal of the Examiner's rejections and allowance of all of claims 1 to 22 as presented in this response are earnestly solicited.

If the Examiner believes that direct communication with Applicants' representative will help advance this application, the Examiner is invited to contact the undersigned.

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